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# Catalog of SEEDS *and* BULBS

**Wholesale 1931 .. Listings**



## *New Flower Creations*

Visit one of the most gorgeous display of blooms in the United States  
at our nurseries



**S**HAW'S Hybridizing Gardens

1143 South San Gabriel Boulevard  
SAN GABRIEL, CALIFORNIA, U. S. A.

# *In Ordering Please Note Instructions*

## **Canadian Customers Please Note**

Money orders from foreign countries should be made out to the postoffice at San Gabriel, Los Angeles County, California, U. S. A.

In accordance with the ruling governing the importation of Nursery Stock from the United States into Canada, it will be necessary to obtain a permit from the Secretary of the Destructive Insect and Pest Act Advisory Board, Department of Agriculture, Ottawa, and file same with the Collector of Customs before shipment can be cleared. Seeds are exempt from this ruling, and may be shipped into Canada without a permit. Dahlia Tubers and Gladiolus bulbs come under the classification of Nursery Stock.

This ruling must be complied with in order to make delivery, and we ask you, in the event of an order, to secure this permit, advising us of the number of same, that we may mark it on the outside wrapper.

Customers not having an account, strictly cash with order. We do not send C. O. D. **No plants or other perishable stock sent C. O. D.**

**ORDER EARLY**—Your orders are filled in rotation. Ordering early will insure the reservation of varieties that later may be sold out, and save you any disappointments.

Order early to prevent disappointment as the demand for some varieties often exceeds the supply.

**TERMS**—Remittance with order. All retail Dahlia orders over \$2.50 delivered, postage prepaid, at your planting time, unless otherwise requested.

**PACKING**—No extra charge for packing. I take great pains in packing my orders, and strive to give all my personal attention to insure their arrival in good condition. I assure you that your order will be securely and carefully packed.

**WHOLESALE DISCOUNT** given only to the trade; if you are not listed in the Horticultural Trade Directory, your business letterhead or business card must accompany all orders to receive discount.

**TIME OF SHIPMENT**—Unless you give a specific shipping date, your order will be shipped to arrive at the proper time to plant in your locality. If you wish your order shipped at any special time, I will appreciate definite instructions, and assure you that you can depend upon me to serve you satisfactorily.

All stock shipped are strong bulbs. As a special price is given on plants, none are shipped except by request. Bulbs are guaranteed to grow, but due to care and conditions beyond my control plants are **not** guaranteed to grow.

**SUBSTITUTION**—The varieties you select are always sent unless you grant me permission to substitute. If you wish a particular color, rather than a particular variety, many times it is to your advantage to mention the fact, as my intimate knowledge and experience oftentimes enables me to improve upon your selection. Therefore, if a substitute is acceptable, be sure to advise me, as otherwise everything is shipped absolutely as ordered.

**ERRORS**—While my system of handling orders is as nearly perfect as possible, in the rush of business errors occasionally occur, and I hope to be promptly notified of such, giving me an opportunity to make proper adjustments. I would suggest that you keep a copy of your order for comparison.

**REMITTANCES**—May be made by Check, Post Office or Express Money Order, or Registered Letter, and if for less than 50c can be made in U. S. stamps. Coin and currency should be sent by registered letter. Customers residing outside the United States please do not send Foreign stamps or currency—a Post Office order is preferable. All unpaid orders will be sent C. O. D. unless satisfactory arrangements can be made when the order is given.

**GUARANTEE**—I wish it distinctly understood that although I take all possible pains, I will not be responsible beyond the purchase price. I guarantee every bulb, root and plant I send out to be just as represented, absolutely true-to-name, reach its destination safely in good growing condition. I will cheerfully replace anything that fails to prove otherwise, and will appreciate your calling my attention to it.

## **OUR RESPONSIBILITY**

It is so manifestly impossible for a seller of any perishable article to be responsible for what may happen to it after it leaves his hand, especially one like seeds, which are planted in the ground under varying conditions of soil and climate that we, in common with all American seed houses, disclaim responsibility as to the crop which may be raised from seeds which we sell.

At the same time, in case of any failure to secure proper results caused from some inherent fault in the seeds themselves, Shaw's Hybridizing Gardens accepts responsibility, **not for crop, but to the extent of the amount of money paid for the seeds, if we are immediately advised** in case of any failure.

We wish it understood that all our stocks are sold under the following conditions:

**WE DO NOT WARRANT** in any way, expressed or implied, the contents or the description, purity, productiveness or any other matter of any seeds, bulbs, plants, shrubs or trees sold by us, and we will not be in any way responsible for the crop. If the purchaser does not accept these goods on above terms, no sale is made thereof, and he must return them at once, and money will be refunded. Subject to above conditions, we make this sale at the moderate prices at which we sell our goods.

If the customer does not accept the goods on above terms, he must return them at once, and money will be refunded or proper credit given. We exercise, however, the greatest care to fill our orders with the highest quality possible, as it is our constant aim to give our customers fullest satisfaction.

**PRICES**—This list cancels all previous offers. Cash must accompany all orders.

All goods are offered subject to crop failure, shortages or other causes beyond our control and to being unsold on receipt of order, and we reserve the right to advance prices without notice.

## Large Growers of Little Seeds

**W**E take pleasure in presenting our new 1931 Catalog. Much care has been taken in making it useful, entertaining and instructive. Of course, cold words can but convey an incomplete picture of the SHAW HYBRIDIZING GARDENS in their truly unusual completeness---the gorgeousness and truth in color; the wide range in colors and varieties, and the ease with which exhibition blooms may be obtained with Shaw's strain of Dahlias, Delphiniums and Petunias.

A visit to our Gardens will bring a new conception to you in the way of colorful gardens---a new life where sameness is beginning to cloy. You are welcome every day in the week including Sunday.

Your especial attention is directed to the list of late introductions on pages two and three. Don't feel your garden is too full to plant at least a few of these newest specimens. You will be overjoyed with the results.

G. F. Shaw.

# Our Own New Dahlia Introductions for 1931

These six new introductions represent continuous effort over a period of three years and a careful selection from thousands of seedlings in our trial grounds. These Dahlias have been given every possible test for color, length and strength of stem and long life as a cut flower. We are proud to put our name to these six outstanding varieties.

Wholesale prices, 33 $\frac{1}{3}$ % less list, except special offer.

**No. 101—SHAW'S RADIANCE.** Decorative. Color, Chinese red with each petal tipped heavy and edged with golden yellow. It has a freshness and brilliancy lacking in most dahlias. This flower just radiates joy from each petal. It has great depth of flower and a full high center with tier after tier of back petals. The flowers have great substance and keep well. The plant is a sturdy grower and a free bloomer for so large a flower. It is a sturdy rather than a rampant grower which accounts for its fine keeping qualities. Plants about 5 $\frac{1}{2}$  feet high.  
**Tubers, \$10.00**



**SHAW'S RADIANCE**  
Chinese Red and Golden Yellow

**No. 102—SHAW'S LITTLE SUNSHINE.** Miniature decorative. Color, cerise-rose, shading lighter on back petals as flowers open up with darker center, which is rich and glowing. The flowers are full to the center up until frost, with cane like small stems. Sometimes 25 flowers are out at one time on a bush, making a most wonderful appearance with its dark glossy green foliage. Plant, 5 $\frac{1}{2}$  feet high. This miniature dahlia deserves the same ranking that its parent "Jersey Beauty" has among the larger dahlias. Flowers 3 $\frac{1}{2}$  inches in diameter. Entirely distinct and striking. **Tubers, \$2.50**

**No. 105—SHAW'S AUTUMN QUEEN.** Hybrid decorative. The color is cerise-red at the base of the petals, and gradually changing into a fawn shade at the end of the petals, and it has a most beautiful golden sheen over all which gives a very rich autumn effect. Flowers held perfectly on a rigid straight stem. Flowers six inches in diameter. Plants 4 $\frac{1}{2}$  feet high. This is an excellent cut flower with lasting qualities. This flower is a great attraction in our garden. **Tubers, \$10.00**



**SHAW'S POINSETTIA**  
Cerise Red and Fawn

**No. 103—SHAW'S POINSETTIA.** This dahlia closely resembles the poinsettia flower, except in color. The color is orange-red, with from one to two rows of petals at the back like the peony dahlia. These petals grow back. The center of the dahlia has from ten to fifteen twirling petals. Some of the petals show the reverse side, with the yellow stamens showing through, which gives this flower a most gorgeous effect, reminding one of the poinsettia. The flower is produced on perfectly rigid straight stems, on a sturdy glossy green bush, four feet high. It is a most excellent cut flower with long keeping qualities. This flower attracts every one who visits our gardens.  
**Tubers, \$5.00**

**No. 104—SHAW'S SNOWFLAKE.** Decorative. Color, pure white. Another seedling from Jersey Beauty. This is the same type flower, high center petals folding back with a perfectly rigid stem. Plant, 5 feet high. This flower is a very prolific bloomer, and an excellent cut flower. Flowers six inches in diameter. **Tubers, \$10.00**

**No. 106—BEATRICE SHAW.** Decorative. Color, lavender pink. A mammoth flower of great beauty. Very uniform in type. Petals fold back giving great depth to the flower, which is ten inches in diameter, on strong, straight stems. Flowers held perfectly on long stems. Plants 5 feet in height. It is a very prolific bloomer and has excellent keeping qualities. This flower is a real prize winner. **Tubers, \$10.00**

# General Dahlia List

Wholesale prices, 33½% less list.

**No. 107—Aztec Glory (H. D.).** Immense lemon-yellow. The most sensational yellow dahlia in our garden. The mammoth flowers are held erect on the best of stems. It has won many awards, for this dahlia is a real champion.

**Tubers, \$3.50; Plants, \$1.75**

**No. 108—Ballet Girl (Cac.).** English Cactus. A flower difficult to describe. It is sometimes orange with a white edge, then again, white shading to orange, or white edged orange, and at times pure orange. The immense blooms attract the attention of every visitor to the garden. Of perfect formation and a good cut flower.

**Tubers, 50c; Plants, 25c**

**No. 109—Barbara Redfern (Dec.).** An enormous decorative of great depth. A wonderful combination of old rose and gold. The mammoth flowers are produced early and continuously, on extra long stems, which hold the flowers upright the entire season. The plant is a healthy, vigorous grower. Imagine, if you can, a ten-inch decorative bloom on a four-foot stem. It was given a rating of 98. Compared with Jersey's Beauty (91 points). Flower lovers who crave beautiful coloring will rejoice in it. Barbara Redfern won many prizes in the East as in the West.

**Tubers, \$1.00; Plants, 50c**

**No. 110—Barbara Wear (Dec.).** The fact that Barbara Wear won at the 1927 exhibition of the Dahlia Society of San Francisco held at the Palace Hotel, the Doubleday, Page & Co's Achievement Medal for "the most worthy new dahlia west of the Rocky Mountains never before exhibited," is in itself a strong recommendation. The color is extremely soft and pleasing, the beautiful flower being a pinkish lavender, shading at the outer ends of the petals to the softest, creamiest effect imaginable. The stems are perfectly straight, very long and exceedingly strong. The flower has good size, great depth and substance, with excellent keeping qualities that will make it in great demand by gardens supplying florists and other cut flower trade.

**Tubers, \$1.00; Plants, 50c**

**No. 111—Big Chief (H. D.).** Color rich autumn shades, general effect is salmon-buff. Immense flowers are carried erect on long stiff stems. Very free bloomers. Height 4 feet.

**Tubers, \$5.00; Plants, \$2.50**

**No. 112—Buccaneer (Cac.).** Color crimson, very large flowers, with fine keeping qualities and good stems.

**Tubers, \$2.50; Plants, \$1.25**

**No. 113—Carnival (Dec.).** A gigantic scarlet with sulphur yellow reverse and filled with yellow collarette petals. It holds its flowers high above the foliage on cane-like stems.

**Tubers, \$1.00; Plants, 50c**

**No. 114—Coral Gem (H. D.).** A most attractive shade of soft coral-pink, flowers of medium size held erect on good stems, a very desirable cut flower of good habit and a free bloomer. Height 5 feet.

**Tubers, 50c; Plants, 25c**

**No. 115—California Gold (Dec.).** Large golden yellow flowers. A beautiful garden variety and cut flower.

**Tubers, 50c**

**No. 116—Cigarette.** A hybrid cactus more vividly colored than Ballet Girl. The color of this lovely blossom is best described as creamy white, heavily edged with orange, but no two flowers are exactly alike. The petals are long and narrow and inclined to roll. The bloom is large and of good substance, and stems of the best quality.

**Tubers, 50c; Plants, 25c**

**No. 117—Cockatoo (Cac.).** Size 5"x3". Height 5 feet. Clear yellow, tinted fawn, tipped white, of fine form

**Tubers, 25c**

**No. 118—Countess of Lonsdale (Cac.).** Size 4½"x3". Height 3½ feet. Yellow, suffused salmon red, overlaid lavender. Early and profuse bloomer. Splendid garden variety.

**Tuber, 25c**

**No. 119—Coringa (H. D.).** Described as capucine yellow, shaded cornelian red (Ridgeway), the rich coppery-orange color of this dahlia attracted more attention in our garden this summer at San Gabriel than any other dahlia. There is no other orange colored dahlia that can compare with this creation, as the color is so vivid that it speaks for itself. Mr. Derrill W. Hart placed this beautiful dahlia on the Roll of Honor in 1928. If you are seeking something entirely different than any other dahlia we highly recommend "Coringa" to you. The medium large flowers are held erect on strong but rather short stems, the petals serrate, always perfectly double.

**Tubers, \$2.50; Plants, \$1.25**

**No. 120—Conquistador (H. C.).** Soft creamy yellow shading to a growing pink at the base of the petals. The pink coloring is very pronounced and gives to the flower the appearance of being illuminated from within. This is a dahlia built on a massive plan. The plant is extraordinarily tall and the flowers can be cut with 4-foot stems. The bloom is in proportion, being regular, rather coarse-petaled, broad and deep. Moreover, the texture of the flower is of the same vigorous quality, not being easily soiled by wind, sun or moisture. Beautiful, vigorous, hardy—a "best dahlia in the show" variety.

**Tubers, \$2.50; Plants, \$1.25**

**No. 121—Donna California (Dec.).** Deep rose-pink suffused with lavender. The color is not new but it is doubtless the largest dahlia by far of that coloring. In fact, it is the largest dahlia that we have ever grown in our gardens, 12-inch blooms having been produced without effort through a long period. The flower is not particularly heavy considering its great size, as its even petal formation is loosely arranged rather than solid. The stems are very strong and very long.

**Tubers, \$10.00; Plants, \$5.00**

**No. 122—Duchess of Marlboro (Cac.).** Size 6"x3". Height 4 feet. Rich, golden orange overlaid silverino. Profuse bloomer.

**Tubers, 25c**

**No. 123—Eagle Rock Gem.** Maize-yellow, shaded orient pink. This is certainly the finest shaped strong-stemmed Cactus Dahlia yet produced. Its form is much finer than Ambassador, and the color is very unusual and pleasing; the habit is good, the flowers always standing perfectly erect. Height 3 feet.

**Tubers, \$5.00; Plants, \$2.50**

**No. 124—Eagle Rock Beauty (H. D.).** A more beautiful combination of pink and cream than displayed in this glorious creation would be difficult to imagine. It is in a class by itself, and unanimously admired by all who see it. It is vigorous in growth, with good habit, and strong stems holding the immense blooms erect, which are full to the center, and produced in abundance until frost.

**Tubers, \$1.50; Plants, 75c**

**No. 125—Eagle Rock Sunshine (Cac.).** Rich yellow of a deeper shade than Sunny South. The flowers are large and held perfectly erect on good stems. Winner of many prizes for best in show.

**Tubers, \$1.00; Plants, 50c**

**No. 126—Eagle Rock Wonder (H. C.).** Color is mars-orange shading to orange-buff with tints of coral-pink and coral-red according to Ridgeway's color chart; the general effect being between orange and apricot. This variety has never yet shown an open center even under the most unfavorable conditions. A monster. Height 5 feet.

**Tubers, \$15.00; Plants, \$7.50**

**No. 127—El Rey (Dec.).** A large beautiful flower of the Jersey Beacon type. Color orange shading to deeper orange at center. Very prolific and insect resistant. Winner at Los Angeles and other shows.

**Tubers, \$5.00; Plants, \$2.50**

**No. 128—Eliza London Shepard (Dec.).** 1930. Size 11"x5". Height 5 feet. Color, a clear rich orange-gold; reflex, a deeper shade of the same color. It has been designated "The DAHLIA BEAUTIFUL." It is the ideal decorative form, and is carried facing to upright on long, straight, rigidly stiff stems. The flowers are always perfect. It will give a single bloom to the plant with a perfect exhibition center, or 25 perfectly formed commercial blooms. The blooms keep a long time on the plant, and when cut. The plant is a strong, vigorous, luxuriant grower, that will grow anywhere, and will be especially valuable in the South and on the Pacific coast, because of its fullness of center late in the season when so many good varieties come with open centers.

**Tubers, \$10.00; Plants, \$5.00**

**No. 129—Ellinor Vandevere (Dec.).** Size 8"x4". Height 5 feet. Color bright rose pink; splendid form on long stiff stems.

**Tubers, 25c**

**No. 130—Electric (Cac.).** Size 5"x3". Height 4 feet. Rich clear canary yellow, each petal heavily tipped white. This is one of the most charming varieties.

**Tubers, 25c**

**No. 131—Edith Carter (Cac.).** Size 5"x3". Height 5 feet. A soft bright yellow, suffused and heavily tipped bright rosy carmine. Of fine form, and produced freely on long stiff stems. An unusually lovely variety.

**Tubers, 25c**

**No. 132—Fair Elaine (Hyb. Cac.).** Delicate old rose. An extra good variety that closely resembles the American cactus type in formation. For true beauty it is hard to surpass and the quantity of good flowers produced is the greatest we have seen; not that it is one of those varieties that requires a lot of disbudding, for it is quite the opposite, but the numerous branches, both upper and lower, all produce good flowers until the very end of the season. Roll of Honor dahlia.

Tubers, \$3.50; Plants, \$1.75

**No. 133—Flatbush Darling (H. C.).** A clear even shade of pure pink from tip of petal to the heart of the flower. Flowers have been left on the bush the entire season without any sign of showing an open center. Foliage and habit clean and vigorous, and free from insect attacks.

Tubers, \$2.50; Plants, \$1.25

**No. 134—F. W. Fellows.** One of the very best Cactus varieties ever raised, with flowers of unusual size for the long narrow petaled type of which this is one of the finest representatives. In color it is an intense coral-red with deeper suffusion at the center; no collection of dahlias is complete without it.

Tubers, 25c

**No. 135—Flaming Meteor.** The long straight stems and good substance of this giant decorative makes it an ideal flower. The color, which is the liveliest flame imaginable, shows to advantage in any kind of light. This beauty, a very prolific bloomer with good center, has created a sensation and proved a winner wherever shown.

Tubers, 25c

**No. 136—Floradora (Cac.).** Size 5"x3". Height 3½ feet. Pure garnet, fine form, profuse bloomer. One of the finest garden dahlias.

Tubers, 25c

**No. 137—Fort Monmouth (H. C.).** One of the giants of the dahlia world. The predominating color is a rich crimson maroon, with shading of bluish violet at tips of petals. The flowers are well formed of true H. C.

Tubers, \$1.00; Plants, 50c

**No. 138—Galli-Curci (Dec.).** This splendid new blossom is large and unusually deep, carried on long stems which are sturdy. Color brilliant salmon orange with good suffusion. As a seedling this bloom had many medals and special awards. We recommend it highly.

Tubers, \$2.00; Plants, \$1.00

**No. 139—George Schofield (Cac.).** Size 6"x3". Height 5 feet. Long whorled, incurved, narrow petals. Color, yellow at center deepening to apricot; distinct white tips.

Tubers, 25c

**No. 140—Gladys Bates (Cac.).** Size 7"x3½". Height 4 feet. Color tan, with rose reverse. An early and extremely profuse bloomer.

Tubers, 35c

**No. 141—Glory of Monmouth.** Size 8"x5". Height 4½ feet. Color a beautiful pastel salmon pink, a most unusual dahlia, with full high center and a profuse bloomer on long stiff stems.

Tubers, \$1.00; Plants, 50c



**GOLDEN TRUMPET**  
Soft Golden Yellow Shading to Amber

**No. 142—GOLDEN TRUMPET.** 1930. (Shaw). One of the most sensational varieties ever originated for cut flowers. Its color is soft golden yellow shading to an amber center with rolled petals. The flowers never show center and bloom early and late. The stems are very long and stiff. This flower is about five inches in diameter, and can be used extensively by florists for decorating purposes, especially table decorations. To see the tall bush in full bloom is a beautiful sight, as the flowers are held so proudly erect and have such an artistic formation and wonderful coloring.

Tubers, \$5.00; Plants, \$2.50

**No. 143—Gov. Morgan F. Larson (Dec.).** Color a clear bright gold. A very large flower with good stems and a fine cut flower. Winner of Gov. Larson's cup at Tren-

Tubers, \$5.00; Plants, \$2.50

**No. 144—H. H. Thomas (Cac.).** Size 5"x3". Height 5 feet. One of the finest forms of the incurved cactus type. Flowers are large with numerous long narrow incurved petals. A beautiful deep rich red.

Tubers, 25c

**No. 145—Hollywood (Cac.).** Size 7"x3". Height 6 feet. Deep salmon pink. A strong vigorous grower, with long stiff stems.

Tubers, 75c

**No. 146—Derrick W. Hart (Dec.).** Considered by many growers to be one of Mr. Broome's greatest originations. Color, capucine yellow shading to grenadine red, in cold weather almost a copper color. The large well-formed blooms are held erect on long, stiff stems.

Tubers, \$5.00; Plants, \$2.50

**No. 147—Mrs. I. De Ver Warner (Dec.).** A very large blossom of soft orchid coloring seldom seen in a dahlia. A refined, lovely deep pink, beautifully formed flower of great size, produced on perfect stems.

Tubers, 25c

**No. 148—Jane Cowell (Dec.).** Size 10"x6". Height 5 feet. Color, golden buff and old gold, blending to apricot and rose at the center. Splendid form on stiff stems.

Tubers, \$2.50; Plants, \$1.25

**No. 149—Jack Hobbs (H. C.).** The color is generally pure white, but occasionally shows a faint creamy shade in the center. Many nine inch flowers were found, without any special forcing.

Tubers, \$1.00

**No. 150—Jersey's Beacon (Dec.).** Size 9"x4". Height 4½ feet. Bright scarlet, with a buff reflex. Very large; splendid form and a free and continuous bloomer.

Tubers, 25c

**No. 151—Jersey's Beauty (Dec.).** Size 6"x4". Height 6 feet. A fine large full pink; a strong grower with good stems.

Tubers, 25c

**No. 152—Judge Shinn (I. D.).** Size 8"x3½". Height 6 feet. Color, gold at center, blending to salmon on the outer petals.

Tubers, \$2.00

**No. 153—Kathryn Charman (Dec.).** Size 9"x6". Height 5 feet. Another 1929 Roll of Honor Dahlia. Color combination most unusual, blending from rich bronzy red to golden bronze at the center. The plant is a strong, vigorous, healthy grower.

Tubers, \$3.50; Plants, \$1.75

**No. 154—Kemp's Violet Wonder (H. C.).** Size 10"x5". Height 5 feet. Color, violet shading to purple.

Tubers, \$5.00; Plants, \$2.50

**No. 155—King Midas (Dec.).** Size 12"x5". Height 4 feet. Color, pure golden yellow. Form perfect; stems long, stiff and straight, holding up the giant flowers. First prize winner everywhere last year. Rated as one of the six greatest of all exhibition dahlias, and the greatest of all golden yellows. The plant is a strong sturdy grower, absolutely healthy, and an early free and continuous bloomer. The flowers are so full that they last on the plant for weeks. Just pull out the back petals from time to time and that wonderful center does the rest. Any of the branches will give 12-inch flowers if fed. For cutting, top out twice, otherwise the flowers are too large.

Tubers, \$5.00; Plants, \$2.50

**No. 156—Lemonade.** Yellow dahlias are becoming very plentiful, but this one attracted a great deal of attention in the field and on the exhibition table on account of its size and beauty. Clear lemon yellow, stiff upright stems, good habit of growth and an excellent keeper when cut.

Tubers, \$1.00

**No. 157—Lolita Velasco (Cac.).** Size 7"x3". Height 5 feet. Pure white, with long, finely quilled, incurved petals; a great favorite.

Tubers, 50c

**No. 158—Mabel Goodacre (Dec.).** "One of the best dahlias I ever originated," says Goodacre. Certificate of Merit at Storrs, 1926. A large beautifully formed flower of an even shade of mauve, darker earlier in season and when first opening out. It is medium in height, a profuse bloomer, and a splendid keeper.

Tubers, \$1.00

**No. 159—Marmion (Dec.).** The color is pure golden yellow, with bronze suffusion on reverse of petals and a deeper bronzy tone on the high center, and outlining each petal. The stems are good and hold the immense blooms gracefully above the sturdy plant.

Tubers, 50c

**No. 160—Marjorie Castleton (Cac.).** Size 5"x3". Height 4 feet. The color is soft rosy pink, tinting lighter toward the center. It is a very rapid grower, with good stems and keeps well after cutting. **Tubers, 25c**

**No. 161—Marian Broomall (H. C.).** Pink and white, descendant of Gladys Sherwood, it is more Cactus in shape and better stems and habit, a beautiful flower. **Tubers, \$1.00**

**No. 162—Meesterstuck (Dec.).** One of the most distinct and attractive varieties of this type. The flowers are perfect in formation, large but graceful; color a rich glowing French purple with brilliant aniline-red suffusion, which is intensified by the citron-yellow base of the petals which give the flower a bi-colored appearance that is quite novel. **Tubers, 25c**

**No. 163—Mexico (Cac.).** The color is a striking deep yellow with streak of rose red on the petals, deepening and widening to the center of the flower, giving a most charming effect. It grows on tall strong bushes, stiff, wiry stems, and has every good habit, and a profuse bloomer. Winner of first prize and bronze cup in the Santa Monica Show, 1929. **Tubers, \$7.50; Plants, \$3.75**

**No. 164—Mrs. Francis Bullard (Dec.).** Beautiful light pink, flowers of immense size, and borne on rather short but strong stems in the greatest profusion; the blooms are very deep and full. **Tubers, \$1.00**

**No. 165—Mildred Brooks Hoover (H. D.).** (Name by request for sister-in-law of President-elect Herbert Hoover.) The originator considers this one of the best dahlias in his gardens, as the color, Spinel-red, is so different. A most distinct and refined flower, of large size and splendid form. A dahlia that should be in every first-class collection. Height 4 feet. **Tubers, \$5.00; Plants, \$2.50**

**No. 166—My Maryland.** This exhibition hybrid cactus is of decidedly unique coloring, a blending of unusually delicate pink with the faintest suggestion of lavender, the pointed petals whorl and twist in such a manner as to blend the two colors. There are pinks and there are lavenders, but this flower is in a color class of its own. Excellent stems and leathery foliage. Awarded the Maryland Dahlia Society's gold medal for the best undisseminated seedling exhibited at the exhibition of the New Jersey Dahlia Society in Atlantic City, hence its name. Also awarded the Garden and Home Builder's Achievement medal. First prize at A. D. S. show in New York for best undisseminated hybrid cactus. Certificate of Merit A. D. S. at Storrs. **Tubers, \$5.00; Plants, \$2.50**

**No. 167—Mrs. Alfred B. Seal (Dec.).** Undoubtedly the largest and finest pure, rich, glowing old rose dahlia ever produced. Flowers are large and of great depth and substance, and are held proudly erect above a fine tall handsome bush. Winner wherever shown. **Tubers, \$5.00; Plants, \$2.50**

**No. 168—Myra Valentine (H. C.).** Size 7½"x3". Height 6½ feet. Very large on long, stiff stems; beautiful purplish lavender of fine form. **Tubers, 25c**

**No. 169—Nature's Jewel (H. C.).** A most delicate shade of orchid pink, of so clear a texture that light seems to be shining through the petals. The large flowers are freely produced on stocky bushes. **Tubers, \$2.50; Plants, \$1.25**

**No. 170—Nancy Sue Lang (H. D.).** Immense star-like flowers, red-tipped gold. Habit of plant is dwarf and very robust. A flower that attracts immediate attention. **Tubers, \$1.50; Plants, 75c**

**No. 171—Netawaka (H. D.).** Orange yellow base shading to jasper red, reverse of petals bright carmine. The petals are twisted so that the reverse color is very much in evidence. The large flowers are borne on good stems, very distinct and pleasing both in form and unusual coloring. Height 5 feet. **Tubers, \$2.50; Plants, \$1.25**

**No. 172—New Glory (H. C.).** Light ox-blood red with tips of petals blazed with white. The petals have a charming quilled effect near the points, and must be seen to appreciate it. Grows to large size, many times reaching 10 inches, on a strong stiff stem. **Tubers, \$4.00; Plants, \$2.00**

**No. 173—Nichu (H. C.).** An extremely large light sulphur yellow of perfect formation. The flowers have fine long stiff stems and remarkable keeping qualities. **Tubers, 50c**

**No. 174—Nova (Dec.).** Bright old rose of the true old-fashioned shade. There is little variation of color throughout the flower and the tone does not change at different seasons. One could hardly imagine a more fascinating color than the lively richness of this old rose. Large perfectly formed flowers on the strongest upright stems are produced in profusion from early

season until frost kills them down. The formation of this entrancing dahlia is quite regular with the broad heavy petals slightly curled and folding back well against the stem. It is an excellent cut flower, lasting well, and gracing any occasion. We recommend this variety as an outstanding introduction. Another Roll of Honor dahlia. **Tubers, \$7.50; Plants, \$3.75**

**No. 175—Nobilis (Dec.).** The flowers are of brilliant crimson, tipped white, and coming in all possible combinations of the two colors. Visitors invariably exclaim over the beauty of this variety, especially the men, who like the bold, large flowers on their dandy stems. **Tubers, 50c**

**No. 176—Ohio Glory (H. C.).** Color deep rich rosy purple. Very large flower; robust and vigorous grower. You will like this flower as it is a real dahlia. **Tubers, \$1.00**

**No. 177—Pacific Sunshine (Dec.).** A handsome light orange colored flower with Cadmium orange reverse. Center of petals deepening to almost an orange red. **Tubers, \$5.00; Plants, \$2.50**

**No. 178—Penn Charter (Dec.).** A very attractive well formed dahlia of large exhibition size with good center and stem. Color is clear golden yellow tinted apricot in a deep, massive, graceful flower. Plant, tall and vigorous with large thick leaves. This dahlia should become a favorite for garden, show or house decoration. Winner of the Silver Medal at the Pennsylvania Horticultural Society 1929 Show as best established seedling. **Tubers, \$5.00; Plants, \$2.50**



**PRINCESS LOURAINÉ**  
Bewildering Lilac Pink

**No. 179—PRINCESS LOURAINÉ (Dec.).** 1930. (Shaw.) This is a remarkable flower of good size. The petals at first appear a rose pink, but as it matures the flower undergoes a complete transformation into a most exquisite shade of lilac pink. The bloom has great depth. The flower never shows center and blooms early and late and has excellent keeping qualities. Flowers held perfectly erect above a fine, sturdy bush. **Tubers, \$7.50; Plants, \$3.75**

**No. 180—Pink Cockatoo (Dec.).** Most unusual type of flower, carried on top of long straight stems, stiff as a ramrod, with long petals hanging straight down like the feathers on a bird's neck. Color, a lovely shade of lavender pink. Foliage vigorous and free from insects.

**Tubers, \$1.50**

**No. 181—Pink Supreme (Cac.).** Size 5"x3". Height 5 feet. This new pink is undoubtedly the best commercial pink cactus of A. D. Livonia color; that particular pink shade that is so seldom seen and so greatly appreciated. The flowers are perfect in form, and produced on very long, straight, stiff stems. A profuse bloomer.

**Tubers, 25c**

**No. 182—Regal (Dec.).** Size 10"x4". Height 5 feet. Color, bronze, heavily suffused with dull old rose and tinting to gold at base of the petals.

**Tubers, \$1.50; Plants, 75c**

**No. 183—Rheinischer Frohsinn (Cac.).** Size 6"x3". Height 5 feet. Rich crimson carmine, white at base of petals, distinct and striking. One of the most brilliantly colored.

**Tubers, 25c**

**No. 184—Red Emperor (Dec.).** Another Holland origination with perfect stems. Large well-formed flowers of intense deep scarlet. A first-class cut flower variety that will surely make a place for itself.

**Tubers, \$1.00**

**No. 185—Queen of the Garden Beautiful.** Size 10"x4". Height 5 feet. Color, primrose yellow. A massive bloom that has become most popular.

**Tubers, 50c**

**No. 186—Rose of the Rancho (Dec.).** 1928. (Shaw.) A refined blossom of old rose. Beautiful flowers of good size and of great depth and substance are borne on good stiff stems, begin blooming early and continue until the end of the season. A very profuse bloomer and wonderful for cut flowers.

**Tubers, \$2.50**

**No. 187—Rose Marie (H. C.).** A lovely shade of rose pink with some blooms showing about an inch of white at base of petals. The color is much like Robert Treat, but will not burn and scarcely fades at all. This is not an immense dahlia—9 to 10 inches—but for sheer beauty it is the best of its color, and the petals are so waved, as to have a positively "marcelled" appearance which added to its lovely color, makes a flower that is very artistic, and exquisitely beautiful. The plants are extremely vigorous and branching, growing 6 feet or more in height, and stems are long and stiff. A prolific bloomer and splendid keeper, and free from insect pests. It is a very liberal producer, and makes large clumps.

**Tubers, \$5.00; Plants, \$2.50**

**No. 188—Runa.** A charming orchid pink decorative with a splendid future as a florists' flower. For the abundance of large blooms no dahlia surpasses Runa. Its long stems and unusual keeping qualities make it an especially desirable cut flower. At the 1927 show of the Dahlia Society of Southern California, Runa was awarded the first prize for the best fifty blooms of one variety.

**Tubers, 50c**

Strong Dahlia plants, that will bloom and make roots—ready April 15th 'til June 15th. Come to Shaw's Gardens and see the largest and most complete Dahlia trial grounds.

**No. 189—Robert E. Lee (Semi-Cactus).** Size 10"x6". Height 5 feet. Color, bright luminous cardinal red; reflex, lighter. Not only a 1929 Roll of Honor Dahlia, but at Camden, in the open to all class, it won, as the best red or crimson, over those grand prize winners Elite Glory and Fort Monmouth. It is not only a brilliant glowing red, but it does not burn or fade. The flowers are carried from facing to upright. They are always full to the center. We guarantee it will come full in the South and California, late in the season when so many come open centered. It was named by an enthusiastic Southerner, as the first dahlia he had seen that he considered was appropriate and worthy of the name.

**Tubers, \$10.00**

**No. 190—Santa Monica (H. C.).** Hybrid Cactus with the quilled cactus qualities predominating, which makes the large blooms most desirable, from an artistic point. The color is a rosy lilac with center pure white. The plant is vigorous, of medium height. Very early bloomer and the very last to quit. Owing to its vigor, heavy disbudding is suggested. Blooms should not be cut until full open. As a keeper it has few rivals.

**Tubers, 50c**

**No. 191—San Clemente (Dec.).** San Clemente took first prize for the best established three-year at the California Dahlia Show, Santa Monica, Calif., and for the best established three-year seedling at the Southern California Dahlia Society's Show at Los Angeles. Also winner of first prize for best seedling class open to all and second prize for best dahlia in show. It is very difficult to describe the color of San Clemente as it is a distinct new break in coloring, being a rich brilliant rose color. It can be easily grown 11 to 12 inches, from beginning of season to the end. The size and color, however, are by no means the best features of this dahlia as it has a perfect stem, fine foliage, and bears a profusion of bloom from the first of July to the middle of November.

**Tubers, \$1.50**

**No. 192—Silverado (H. C.).** White with a tiny touch of lavender at the center. Huge, feathery blooms that are always perfect. The bushes are strong growing and hold up the marvelous flowers on fine stems.

**Tubers, \$1.50**

We are growers, not dealers. Our roots are grown right and will give you the greatest satisfaction. We will replace any Dahlia variety that is not true to name.

**No. 193—Signoer (Cac.).** The size of this Belgian dahlia is really amazing when well grown. Very deep blood red, petals of a velvety texture, the flowers are held erect on very good stems.

**Tubers, \$1.00**

**No. 194—Somerset (Dec.).** A vigorous grower, producing immense flowers; on excellent stems. It is a shaggy decorative, the petals being slightly curved or twisted in a pleasing and artistic manner. The color is described as salmon, blending to old rose, but there is also a hint of other delicate underlying tones, making a rich and elusive shade which words cannot properly convey.

**Tubers, 50c**

**No. 195—Sweet Briar (Cac.).** Size 5"x3". Height 4½ feet. Clear pink, without shade or blemish; fine form.

**Tubers, 25c**

**No. 196—Supreme Glory (Dec.).** Seedling of Elite Glory a beautiful golden yellow with reverse of all petals heavily flushed with the red of its parent—Elite Glory—and with face of some petals slightly tinted with the same, particularly in the early blooms, making a flower of rare beauty. The petals are very long and wide, and the center is absolutely full, always. One of the first to bloom, it is full of flowers till frost, and is the most prolific big dahlia I know. The flowers, which are deep as well as large in diameter, have been grown to 11½ inches with no feeding, forcing or disbudding, and the plant is practically immune to insect pests, even the borers seldom attacking its hard and woody stem. Considered by visitors and practically all who saw it, as the outstanding variety in my gardens.

**Tubers, \$7.50; Plants, \$3.75**

**No. 197—The World (Dec.).** Size 9"x4½". Height 4½ feet. Color, rich deep, rosy magenta overlaid garnet with silver tinting on edges of petals. A most unusual variety.

**Tubers, \$3.50; Plants, \$1.75**

**No. 198—Tommy Atkins (Dec.).** Size 7"x3". Height 6 feet. A very popular variety at our trials as well as for exhibition, cutting and the garden, on account of its large size, fine form, splendid keeping qualities and its vivid flame color.

**Tubers, 25c**

**No. 199—Tommy Burch (Dec.).** Rose pink with lighter strip through center of each petal. Very large flowers; also good keeper as cut flower.

**Tubers, \$2.50**

**No. 200—Thomas Hay (Dec.).** In this variety we offer a real giant. The wonder of it is that such an enormous flower can be so beautiful. The perfect decorative type, the pure clear lilac color, the soft satin texture all combine to produce a truly delightful flower, which is held stiffly erect on first-class stems. It is also the most free blooming of all the large flowered varieties. We are very proud to offer this, and feel sure it will be enthusiastically welcomed everywhere.

**Tubers, \$1.50**

**No. 201—Watchung Sunrise (Dec.).** This is possibly the best new dahlia of the year and was the sensation of the New York show. It is rich golden yellow suffused amaranth pink towards the outer petals. The flowers are enormous and when fully developed form a perfect sphere. It is a vigorous grower, and the stems are perfect.

**Tubers, \$1.00**

# Select Rosette Dahlias

These have already become most popular. They embrace the small Decorative and the intermediate between Pompon and Ball. They are all profuse bloomers.

Wholesale prices, 33 $\frac{1}{3}$ % less list, except collections.

**No. 206—Amaranth.** Size 2"x1". Height 3 feet. A seedling of Little Jewel and somewhat similar except the color. Color, at base of petals, bright amaranth purple; tinting to light rosaline purple at tips. **Tubers 75c**

**No. 207—Babette.** Size 2"x1". Height 3 $\frac{1}{2}$  feet. Very profuse bloomer, white suffused pink; outer petals, shading to cameo pink. **Tubers 75c**

**No. 208—Cocarde.** Size 2 $\frac{1}{2}$ "x2". Height 3 feet. A most exquisite shade, a combination of soft salmon pink, shading to salmon rose. Beautiful regular form, and an early, free and continuous bloomer. **Tubers 50c**

**No. 209—Little Jewel.** Size 2"x1". Height 3 feet. Sometimes called decorative pompon, and listed as a pompon, but it is one of the original Rosettes. A beautiful bright, luminous pink tinting lighter toward the tips. **Tubers 50c**

**No. 210—Rufus.** Size 3"x2". Height 3 feet. The illustration shows the beautiful form. It is an extremely profuse bloomer. Color, bright scarlet red. **Tubers, \$1.00**

**No. 211—Splendens Imbricata.** Size 2 $\frac{1}{2}$ "x2". Height 2 $\frac{1}{2}$  feet. Color vivid cardinal red; splendid form and profuse. **Tubers 25c**

**No. 212—Sweetheart.** Size 2 $\frac{1}{2}$ "x1 $\frac{1}{2}$ ". Height 4 feet. Color, crimson tipped white. **Tubers 25c**

## Pom Pon Dahlias

Very small compact flowers. The smaller the better, so do not require disbudding.

### SEVEN NEW EASTERN VARIETIES

**No. 213—Artie.** Picric yellow. A splendidly formed flower, and held erect on good stiff stems. Plant is strong vigorous grower, and profuse bloomer. **Tubers 75c**

**No. 214—Buddy.** Quite distinct. Rose red, with quilled petals, somewhat incurved. **Tubers 75c**

**No. 215—Little Paul.** Deep rose red, tipped white; an acquisition to the tipped type. **Tubers \$1.00**

**No. 216—Paul Horompo.** Another tipped variety that is a great improvement over existing varieties. Speculum red, tipped white. **Tubers \$1.00**

**No. 217—Sonny.** Soft lemon yellow, tips of petals, Tyrian rose. Very pleasing. **Tubers 75c**

**No. 218—Sprig.** Splendidly formed exhibition variety. Bronzy yellow, outer half of petals lightly suffused and tipped reddish buff. **Tubers 75c**

**No. 219—Teddy.** Deep rose red; quilled petals. A strong grower and profuse bloomer. **Tubers 75c**

## New, Superb, Standard Pom Pon Dahlias

	Tubers
<b>No. 220—Atom.</b> Orange, very small, good bloomer.	25c
<b>No. 221—Aimee.</b> Bronze.	25c
<b>No. 222—Ann Von Schwerin.</b> Pale pink.	50c
<b>No. 223—Annie Doncaster.</b> Soft yellow and mauve.	25c
<b>No. 224—Bantam.</b> Brownish red.	50c
<b>No. 225—Dandy.</b> Bright orange.	25c
<b>No. 226—Dee Dee.</b> Pure lavender.	25c
<b>No. 227—Dazzler.</b> Yellow, heavily tipped brownish red.	25c
<b>No. 228—Edith.</b> Yellow, heavily tipped brownish red.	25c
<b>No. 229—Elizabeth.</b> Orange tipped red.	25c
<b>No. 230—Eunice.</b> Pale lavender shading to white.	25c
<b>No. 231—Helen Anita.</b> Pinkish lavender shading lighter at center.	25c
<b>No. 232—Johnny Peppin (new).</b> Small dark crimson, splendid formation.	75c
<b>No. 233—Leda Beeler.</b> Bright lavender.	25c
<b>No. 234—Mary Munns.</b> Cerise pink.	25c
<b>No. 235—Mike.</b> Burnt orange.	25c
<b>No. 236—Omega.</b> Amethyst.	25c
<b>No. 237—Peggy Ann (new).</b> Yellow, edged and shaded brownish red, prolific bloomer.	50c
<b>No. 238—Rosebud.</b> Deep rose shading to white at center.	25c
<b>No. 239—Yellow Gem.</b> True yellow.	25c

## Special Pom Pon Dahlia Collections

Arranged especially to give extra value to those who are not acquainted with various varieties.

### Collection No. 1

#### 10 Dainty Pompons—\$2.00

Annie Doncaster	Eunice
Dandy	Helen Anita
Dee Dee	Leda Beeler
Edith	Mike
Elizabeth	Yellow Gem

### Collection No. 2

#### 8 Dainty Pompons—\$2.50

Ann Von Schwerin	Johnny Pippin
Rose Bud	Dazzler
Amega	Dandy
Mary Munns	Peggy Ann

Strong Dahlia plants, that will bloom and make roots—ready April 15th 'til June 15th. Come to Shaw's Gardens and see the largest and most complete Dahlia trial grounds.

## Special Dahlia Collections

### Collection No. 3

#### 8 Decorative and Hybrid Cactus—\$30.00

Jane Cowl	Eagle Rock Beauty
Derrick W. Hart	Mrs. Alfred B. Seal
Golden Trumpet	Mildred Brooks Hoover
Donna California	Princess Louraine

### Collection No. 4

#### 8 Decorative and Hybrid Cactus—\$25.00

New Glory	El Rey
Penn Charter	King Midas
Regal	Gov. Morgan F. Larson
Eagle Rock Sunshine	Fort Monmouth

### Collection No. 5

#### 8 Decorative and Hybrid Cactus—\$6.00

Watching Sunrise	Queen of the Garden
Tommy Atkins	Beautiful
Rose of the Rancho	Mable Goodacre
Santa Monica	Marian Broomall
Runa	

### Collection No. 6

#### 8 Decorative and Hybrid Cactus—\$3.25

Myra Valentine	California Gold
Ellinor Vandevere	Barbara Wear
Carnival	Barbara Redfern
Cigarette	Flaming Meteor

### Collection No. 7

#### 8 Decorative and Cactus—\$2.25

Jersey Beacon	F. W. Fellows
Jersey Beauty	Ballet Girl
Mrs. I. De Ver Warner	Flaming Meteor
Watching Sunrise	Santa Monica

# Beautiful Dahlias, Low Prices

Wholesale prices, 33½% less list.

**12 Decorative, Our Selection, All Named  
\$2.00**

**12 Mixed Seedlings, Not Named—\$2.00**

**All Splendid Varieties, Good Stems and Flowers**

Our \$5.00 Surprise Collection for those who want the greatest value for their money. Our selection filled after May 1st.

Our \$10.00 Surprise Offer, filled only after May 1st, for those who want our selection of 12 World's Dahlias.

Every root goes out with our iron clad guarantee of entire satisfaction. It is not so much this guarantee that has made us large growers of dahlias as the superiority of our stock, which makes such a guarantee possible, and our quick and cheerful adjustment of anything that is not satisfactory.

We also wish to acknowledge and thank our thousands of customers for their letters of thanks and appreciation. We appreciate your letters of praise for our dahlias, for your success is our success. We also appreciate your writing us of any failure, as in this way we learn many things about different varieties, in different locations, under different soil and climatic conditions.

## Dahlia Seeds

Few plants can rival for depth and richness of color with the dahlia. Nothing can brighten the garden borders with more telling effect, and few plants are of more easy culture. Few public or private gardens are now without them; their good qualities of neatness and compactness of habit, together with an extremely free and long-continued succession of bloom, being generally recognized and appreciated. We use plants of the very best varieties of decorative type for parent plants. They are of excellent formation, strong, straight, stiff stems, large flowers, good depth and good keepers.

Much pleasure can be derived from growing dahlia seed. Dahlias grow very easily from seed. They will make large plants the first year. New varieties are produced in this manner.

## List of Dahlia Seed

**Hand pollinized seed of the following varieties, \$7.50 per hundred.**

Robert E. Lee (S. C.)	King Midas (D.)
Penn Charter (D.)	Kemps Violet Wonder
Mrs. Alfred B. Seal (D.)	(H. C.)
Mildred Brooks Hoover (H. D.)	Jane Cowl (D.)
New Glory (H. C.)	Gov. Morgan F. Larson (D.)
Donna California (D.)	Supreme Glory (D.)
Eagle Rock Beauty (H. D.)	The World (D.)
Eagle Rock Wonder (H. C.)	Thos. A. Edison (D.)
Eliza London Shepard (D.)	Ty Cobb (H. D.)
Aztec Glory (H. D.)	My Maryland (H. C.)
Fort Monmouth (H. C.)	Seals Californian (D.)
Golden Trumpet (H. C.)	Waldheim Sunshine (D.)
	Monmouth Champion (D.)
	American Triumph (C.)
	Treasure Island (D.)

**Dahlia seed of the following varieties offered in mixture or separate varieties, \$2.00 per 100.**

Queen of the Garden	Edith Carter (C.)
Beautiful (D.)	Electric (C.)
Princess Louraine (D.)	Eagle Rock Gem (C.)
Marion Broomall (H. C.)	Cigarette (H. C.)
Eagle Rock Sunshine (C.)	F. W. Fellows (C.)
Barbara Redfern (D.)	George Schofield (C.)
Flaming Meteor (D.)	Watchung Sunrise (D.)
Jersey's Beacon (D.)	Tommy Burch (D.)
Jersey's Beauty (D.)	Rose of the Rancho (D.)
Tommy Atkins (D.)	Pink Supreme (C.)
Runa (D.)	Marmion (D.)
Nature's Jewel (H. C.)	Meesterstuck (D.)
Nova (D.)	Eleanor Vandevere (D.)
El Rey (D.)	

## Pom Pon Dahlia Seed

**100 Seeds, mixed or separate varieties, \$1.00**

## Rosette Dahlia Seed

**100 Seeds, mixed or separate varieties, \$1.50**

### How to Pollenize Dahlias

Seed of hand pollenized varieties should be ordered early as we have a big demand for them, and are soon sold out. Our method of hand pollinating Dahlia flowers is not hap-hazard; each petal of flower is pollinated from the time first petal opens out, placing pollen on each little pistol lying at the base of petal on inner side; this insures a real cross of varieties when crossed. You will find the largest seeds always are found around the outside of flower pods and never in the center where most pollen appears. I never cross the center of the flowers. However I obtain all pollen used from the center of flower after cutting and placing in water away from the bees that strip it of pollen. It takes about 7 days to cross a Dahlia flower; a little time each day until flower is full open. This is the only true way to cross this wonderful flower and be sure of your cross. This takes time, hence our price of \$7.50 per hundred for this seed. The quality is in this seed. Ask anyone who has ever grown our seed or visit our seedling Dahlia field and see for yourself. Crosses are made of varieties only, that have real merit and have been tested as parents or late prize winners.

## Don't Read This Article

Unless you want better flowers, greener lawns, finer shrubs, trees and 50% larger crops.

Why does everything grow so luxuriously in the forest and woodland? How many times in rambling through the woodlands, seeing the wild flowers and shrubs growing so luxuriously have you wished your flowers and plants would grow that way in your own garden?

We invite you to become acquainted with this method of growing Nature's way—by air sub-soiling.

Costly? No! Very little expense and Mother Nature does the rest. See us at once about this system. Work contracted for. Air sub-soiling machines sold.



Delphinium Spikes Seven Months After Planting Seed

# Shaw Strain Hybrid Delphinium

The Shaw strain of Hybrid Delphinium is the result of eighteen years selecting and improving, by hand pollinating, from the finest English Hybrids. In the 1928 Southern California Gladiolus Show these famous flowers won first prize over all California grown Delphiniums. The flowers range in size from one inch to almost four inches in diameter and come in a bewildering range of colors: blue, lavender, purple, pink, yellow, mauve and white. These seven colors are all of the most exquisite shades and the grower can feel secure in getting 85% to 95% true color blooms.

This new Shaw strain is speedily taking the place of the older Belladonna and Bellamasum and other strains of Hybrids for cut flower, as the rich coloring, the larger flowers and their lasting qualities have proven very superior indeed to all other varieties.

Wholesale prices, 33 $\frac{1}{3}$ % less list.

## Named Varieties Delphiniums

**No. 249—Towering Jewel.** Double, color light blue with pink markings; the most wonderful flowers we have ever seen; flowers 3 $\frac{1}{4}$  to 3 $\frac{1}{2}$  inches in diameter; beautifully placed on towering spike; every one who loves Delphinium should have this flower.

Trial Pkg., \$2.50; per oz., \$100.00

**No. 250—Dainty Maid.** Double, lightest of blue, center lavender pink, white bee; medium size flowers on graceful spikes with perfect form, exceedingly handsome.

**No. 251—Her Majesty.** Double, light blue, center lavender pink, dark brown and pink bee with yellow beard. Most beautiful.

**No. 252—Autumn Queen.** Double, brightest of blue, inner petals rose, tipped bright blue, white and rose bee. Very stately spike with wonderful large flowers, fine spacement. Extremely handsome.

**No. 253—Romance.** Double, brightest true blue, inner petals true blue edged, plum color and frilled, white and plum color bee. This wonderful flower on its tall stately spike holds one and all who gaze upon it and they marvel at its beauty.

**No. 254—Fairy Queen.** Double, pale blue, inner petals, pale blue center edging into pink at outer edges with frilled lavender and brown striped bee with yellow beard. Medium size flowers on wonderful spike; this is the daintiest of all Delphinium.

**No. 255—Monarch.** Double, dark blue, mauve center, purple and white bee, very large flowers, tall spike. Exquisite.

**No. 256—Sky Rocket.** Semi-double, pale blue, center petals lavender pink, yellow bee, flowers 2 $\frac{3}{4}$  inches in diameter. Wonderful tapering spike, beautiful beyond words.

**No. 257—Purple Robe.** Double. Color deep purple, white bee. Flowers beautifully placed on long spike.

**No. 258—Little Boy Blue.** Double, outer petals lavender, inside petals medium blue and pink; all petals tipped peacock green, brown, bee, good size.

**No. 259—Sensation.** Double, color rosy-mauve over 2 $\frac{1}{2}$  inches in diameter; flowers beautifully placed on long spike; this flower is a real prize winner.

**No. 260—Blue Bird.** Single, light blue shading into pink; white bee; flowers average 3 inches in diameter; very fragrant; our best single flower.

**PRICES**—Above varieties of Delphiniums: 100 seeds, \$1.00; 1/16 oz., \$3.50; 1/8 oz., \$6.50; 1/4 oz., \$12.50; 1/2 oz., \$25.00. This price applies to mixed double seed and mixed double and single seed.

**No. 261—Mount Shasta.** Double, lavender with brown bee; very large.

**No. 262—Triumph.** Double, violet; very large flowers on long, handsome spikes.

**No. 263—Empire.** Double, immense flowers; sky blue, pink center; one of our very finest.

**No. 264—San Francisco Maid.** Double; outer petals dark blue; inside petals amethyst, yellow bee; very large.

**No. 265—Santa Rosa Jewel.** Double; outer petals light blue; inside petals lavender, which protrude; very large.

**No. 266—Fragrance.** Double; medium blue and pink mixed; striped blue and white bee; good size.

**No. 267—Fascination.** Semi-double; outer petals light blue; inside petals lavender; very large.

**No. 268—Princess Glory.** Double; light blue and lavender mixed; white bee; very delicate; medium size.

**No. 269—Venetian Skies.** Semi-double; color, clear blue with rose markings; white and blue bee; long spike.

**No. 270—California Gem.** Single; color rosy-purple with bee; large flowers, beautifully placed on long spike; very fine.

**No. 271—Purple Giant.** Semi-double; dark purple self; very large flowers; wonderful spike.

**No. 272—Lavender Prince.** Single; pure lavender with white bee; very large and fragrant; wonderful spike.

**No. 273—Blue Souvenir.** Single; dark blue with prominent black bee; long spike.

**No. 274—Silver Lake.** Single; light blue with white bee; very large and very fragrant; wonderful commercial variety for cut flowers.

**No. 275—Catalina Blue.** Single; medium blue; very clear color; white bee; very large and very fragrant; wonderful commercial variety for cut flowers.

**PRICES**—Above varieties of Delphinium seed: 100 seeds, 50c; 1/16 oz., \$2.00; 1/8 oz., \$3.50; 1/4 oz., \$6.50; 1/2 oz., \$12.50. This price applies to mixed single seed also.

Delphinium seed will average 18,000 seeds to the oz.

Any seed sold by us will germinate if properly treated and we cannot be responsible for non-germination due to careless handling. We make no exceptions to these rules.

Large, 2-year Delphinium Clumps shipped only during December, January and February of named varieties, \$1.50 each or \$15.00 per dozen. One year seedling plants mixed, \$10.00 per dozen. Selected plants in solid colors, \$15.00 per dozen. Shipping charges paid on lots of one dozen or more plants.

## Delphinium Plants

F.O.B. San Gabriel, Net

In 2 $\frac{1}{2}$ -inch pots varieties

No. 249 to No. 260.....	\$ 1.50 per doz. \$11.00 per 100
No. 261 to No. 275.....	\$ 1.25 per doz. \$ 9.00 per 100

**Instructions for Planting Delphinium Seed  
on page 13**

# "Shaw Strain" Gigantic Ruffled and Frilled Petunia Seed

Direct from Originator and Grower to You

## Trade Packets 1000 Seeds

These prices are Wholesale—No discount.

### Gigantic Ruffled Petunias

**No. 301—Red.** with black throat.

**No. 302—Red and White Variegated.** Large yellow center.

**No. 303—Pink.** Strong veined center and exquisite color combination.

**No. 304—Mauve.** Center heavily veined with royal purple.

**No. 305—Giant Copper Red.** Improved. Ruffled distinct and beautiful; color terra cotta rose with bronze throat; flowers 5 to 7 inches in diameter.

**No. 306—California Rose.** Ruffled beautiful rose color with strongly veined white throat; flowers 5 to 7 inches in diameter.

and heavily fringed. Flowers are  $3\frac{1}{2}$  inches in diameter; it is a very compact grower and a profuse bloomer. This Petunia is admired by all who see it, as it is the most outstanding pink Petunia on the market today. The mass of bloom and richness of color attracts every one. We can highly recommend this Petunia to the trade as an ideal Petunia for pot plants, as well as a wonderful bedding plant.

Sample pkg., 50c; Trade pkg., \$1.50

**No. 312—Floretta.** Steel blue veined black, flowers handsomely ruffled, golden yellow throat.

Sample pkg., 50c; Trade pkg., \$1.50

**No. 313—Theodosia.** Beautifully fringed rose pink, golden yellow throat.

**No. 314—Coerulea.** Light blue with dark crimson veins heavily fringed.

**No. 316—Pepita.** Flowers dark carmine changing to scarlet; blotched white.

**No. 317—Pepita.** Flowers dark carmine, solid color.

**No. 318—Triumph.** Beautifully ruffled bright pink; flowers 3 to 4 inches in diameter.

**No. 319—Flesh Pink.** Frilled; a most beautiful variety with frilled edges; flowers 3 to 4 inches in diameter.

**No. 320—Albo-Lutea.** Whitish yellow with yellow throat. Frilled.

**No. 321—Matchless.** Heavily fringed; flesh pink; pale throat. Wonderful pot Petunia; low flowering; profuse bloomer.

**No. 322—Charm.** Apple blossom pink, heavily ruffled and frilled. Profuse bloomer. A dandy pot Petunia.

Above varieties, except where otherwise noted,  
Sample pkg., 25c; Trade pkg., 50c

### PLEASE NOTE

Petunias number 311, 312, 328 and 329 in 1000 seed packets only—no quantity price.



SINGLE PETUNIAS IN 3-INCH POTS 10 WEEKS AFTER SOWING SEED

No. 1: Matchless. No. 2 and 3: Pink Empress. No. 4: Charm. No. 5: Red, Gigantic Ruffled. No. 6: Improved Copper Red

## Giant Broad-Petaled Petunias

No. 323—**Silverado.** Shell pink, 4 inches in diameter. Very compact grower. Profuse bloomer.

No. 324—**Purple King.** Red purple. Very compact grower.

No. 325—**Purple Robe.** Wonderful deep purple, broad petaled flower, 3 to 4 inches in diameter; small percentage of double flowers. The finest of all purple Petunias. Excellent pot flower.

No. 326—**Elk's Pride.** A royal purple single Petunia, smaller than the above variety.

No. 327—**Purple and White Variegated.** A very profuse bloomer, same as purple robe except variegated.

No. 328—**Giant Pink Glory.** Pure flame rose pink, broad petaled flowers 4 inches in diameter. A most excellent pot Petunia.

Above varieties—Sample pkg., 25c; Trade pkg., 50c.

## Giant Double Varieties

### Seeds Taken Only from Double Flowers

No. 329—**Shaw's Pride.** New, true salmon pink of the Peony type. Flowers 4 inches in diameter. Will produce 65% double flowers. This is a marvelous new color in Petunias and one of the most striking colors yet produced. A very compact grower and a profuse bloomer. Color does not fade.

Sample pkg., \$1.00; Trade pkg., \$3.00

No. 330—**Pride of Los Angeles.** Giant double flowers 4 to 5 inches in diameter, colors ranging from pink to deep rose shades. This variety is very heavily frilled. Produces 50% full double flowers, 35% semi-double, and 15% single flowers which are large and also heavily frilled. No flowers need to be discarded because of small inferior blooms.

Sample pkg., 50c; Trade pkg., \$1.50

No. 331—**Pride of Los Angeles.** Light pink, solid color, same as above variety.

Sample pkg., 50c; Trade pkg., \$1.50

No. 332—**Pride of Los Angeles.** Rose pink, solid color, same as No. 330.

Sample pkg., 50c; Trade pkg., \$1.50

No. 333—**Shepard's Double.** Large Peony type double flowers in a mixture of self and variegated colors, heavily fluted and ruffled. Produces 65% double flowers.

Sample pkg., 50c; Trade pkg., \$1.50

## Petunia Seed in Quantity

### Gigantic Ruffled Variety

(In Separate or Mixed Colors)

1 64 oz., \$3.00; 1 32 oz., \$5.00; 1 16 oz., \$9.00

### Giant Fringed Variety

Nos. 313 to 322:

1 64 oz., \$2.00; 1 32 oz., \$3.50; 1 16 oz., \$6.50

### Giant Broad Petaled Variety

Nos. 323 to 327:

1 64 oz., \$2.00; 1 32 oz., \$3.50; 1 16 oz., \$6.50

See Instructions for Planting Petunia Seed on page 11



**DOUBLE PETUNIAS IN 3-INCH POTS 10 WEEKS AFTER SOWING SEED**  
No. 1, 2, and 5: Pride of Los Angeles Double Petunia. No. 3 and 4: Shepard's Double. No. 6: Shaw's Pride, Double

## Giant Double Variety

Nos. 330 to 330  
1 64 oz., \$8.00; 1 32 oz., \$15.00; 1 16 oz., \$28.00  
Petunias Nos. 311, 312, 328, and 329 in 1000 seed packets only.

### Petunia Plants

Prices F.O.B. San Gabriel

Grown in 3-inch pots and ready from November 1st until October 31st. Shipped by express anywhere.

Gigantic ruffled and frilled varieties, 3-inch pots.

12½c each; \$1.30 per doz.

Giant double seedlings, 3-inch pots.

15c each; \$1.50 per doz.

Giant double selected cuttings, large flowers, all colors in 3-inch pots.

20 each; \$2.25 per doz.

## Gladiolus Seed

This seed is taken from hand pollinated flowers from the very latest and finest gladiolus. Such varieties as Mrs. Leon Douglas, Pfitzers-Triumph, Coronado, Vielchenblau, W. H. Phipps, Albatross, The Orchid, Tycho Zang, Heavenly Blue, Orange Wonder, Mrs. Van Kongnenburg, Rozan, Star of the Sea, Mother Machree, Frank J. McCoy, Fredrick Christ, Col. Chas. Lindberg, Lily of Gold, Matilda Ann, Mrs. Calvin Coolidge. Also many new gladiolus of our own that have never been placed on the market. Some from the wild species used are: Alatus, Blandus, Callistus, Cardinalis, Cuspitatus, Debilis, Machaultus, Psittacinus, Dracoccephalus, Psit. sub. sp., Tristis coneolor dwarf, Tristis, Watsonius, Grandis, Recurvus, Graeilis, Hirsutus and Orchidiflorus. These ought to give some wonderful breaks aside from new colors. Most hybridizers use only hybrids giving little chance for anything except change in color from what we now have. You will have some real surprises in each package of this seed.

Trial pkg., 100 mixed seeds, \$1.00; 10 pkgs., \$7.50.

## Watsonia Seeds

Selected from the latest and finest standard and novelty varieties of Watsonia Hybrids. This seed should produce some fine new colors and exceptionally large single and double flowers.

Mixed Trade pkg., Watsonia Seeds, 50c; 10 pkgs., \$4.00.

## Aquilegia

Shaw's Strain. A wonderful new strain of pastel shades, flowers up to 3½ inches in diameter, long spurred, plants average 3½ feet high, and is a very profuse bloomer. Fine for cutting.

Sample pkg., 25c; Trade pkg., \$1.00.

Plants in 3-inch pots, \$1.00 per doz.

## Hybrid Amaryllis

This giant flowering type is a cross between selected large flowering varieties, crossed with the Hawaiian, giving a most beautiful variety with strong, wide open flowers 4 to 6 per stem, colors ranging from white to deep maroon, wonderful salmon colors. Five-year bulbs flower from 3 to 6 times a year. Most wonderful pot plant. Flowers in 18 months from seed.

1½ to 1 inch bulbs.....	\$2.50 per doz.
1¼ to 1¾ inch bulbs.....	3.50 per doz.
2 to 3½ inch bulbs.....	5.00 per doz.

Seeds per 100..... 2.50

## Delphinium Planting Instructions

We are herewith printing instructions for the planting of Delphinium seed and the handling of small plants.

Sow seed from February to October, according to climatic conditions. Leaf mold and sand is best if available. Level the soil in flats, making rows three inches apart, one-eighth inch deep. Plant seed quarter-inch apart, barely covering seeds. Assure yourself of good drainage in the bottom of flats. It is a good idea to place half-inch of coarse gravel in the bottom of the flat before filling with soil. After seeds have been planted, spray the top of your soil with a weak solution of Uspulin or Semesan. This will have a tendency to check damp-off. Then water well with fine spray so as not to wash soil and do not at any time allow soil to become dry. 75% of failure in germination of seed is due to drying out of soil. Flat the small plants as soon as the second or third leaf appears, placing about two inches apart, adding more loam to the soil and a little bone meal. Shade plants for about a week. After fifth or sixth leaf has appeared we shift plants in from 2½ to 3-inch pots. They are now ready to sell or to place in the field. Plants may be kept in these pots from three to six months for selling purposes. They will form an excellent rooting system so that when they are set out they will bloom in three months. This is the best way to handle Delphinium rather than selling the blooming clump from the field, thereby cutting the roots in baling the plants, which cause the loss of a large percentage of plants.

Delphinium plants can be transplanted very easily during their dormant season and after they are three years old the clumps may be divided.

Planting them at same level they were before. Delphiniums are fast growing plants and need plenty of moisture and sunshine. Never use fresh manures in fertilizing. Bone meal is the best fertilizer, providing that the ground has plenty of humus; if not, add well rotted cow fertilizer, with a small amount of lime. If available use a small portion of Toro Brand Sulphur which will have a tendency to check blight and destroy fungus growth which is present in so much of the soil. We do not cultivate out field plants, but mulch with humus to hold moisture. If these instructions are followed you will have no difficulty in raising beautiful Delphiniums.

### NO "IF" HERE

Enclosed please find my order for some Petunia Seed. Also my check to cover.

If the Petunia Seed turns out as satisfactory as the seed of delphinium which I bought from you some time back, then I shall be pleased.

As I think your delphinium are the best in the state.

Yours very truly,

C. GANDIL.

C. Gandil's Nursery  
West Berkeley, California.

### INSTRUCTIONS FOR SOWING SHAW'S WORLD FAMOUS PETUNIA SEED

Prepare a seedbed by taking two parts of any light compost or leaf mold thoroughly mixed with one part of clean sand. Sift all through a fine screen. With this mixture fill flats or seed pans, pressing down the soil to a flat surface evenly within two inches of the top. Give a thorough soaking. After water has seeped into the soil, sprinkle the Petunia seed evenly over this surface, but do not cover with the least bit of soil. To prevent attacks, however, of fungi, which might easily kill the young Petunia plants, sprinkle the newly-sown flats with charcoal dust. Place a clean pane of glass over the flat or seed pan, and in the daytime, if reached by the sun's rays, place a single sheet of newspaper over the glass to prevent danger of burning. At night and in dark weather remove this sheet of paper. Avoid carefully all excess of moisture and have pans near glass in well-ventilated atmosphere. As soon as the seed sprouts (say in eight to ten days after sowing, if kept at a temperature of 60 degrees) take off the pane of glass entirely. The young plants should be transplanted as soon as possible into flat boxes, spacing them an inch apart. Shortly thereafter they should be put into two-inch or three-inch pots.

If this seed is handled right, every kernel will germinate, as they are cleaned by a process where only fertile kernels are selected. Ants will carry off the seed if they have any access to same. Snails will eat the young seedlings, a great many in one night. For this reason seed boxes should be so placed so that snails and ants are unable to reach them. Most of the loss of seed occurs in this way.

We would suggest in this case that the seed box be placed on small blocks of wood. The blocks resting in jars or pans, the latter containing either oil or water. The ants and snails are unable to cross the oil or water, and consequently cannot reach the seed.

## History of the Dahlia

The Dahlia is a native of Mexico, where it grew wild, and in its single form. Earliest history dates back to 1657, when it was called Acoctli by the Aztec Indians. Later the name was changed to Georgiana, after Professor Georgi of St. Petersburg, which name is still used in some of the foreign catalogs. It was again changed to Dahlia, in honor of Dr. Andrew Dahl, a Swedish botanist.

The Dahlia was first cultivated in the Botanic Gardens, at Madrid, Spain, in 1789, and at about the same time was introduced into England by the Marchioness of Butte.

Dahlia Variabilis, from which most of the common or show Dahlias have originated, was single in its wild state. The first double forms appeared in 1814 and were credited to M. Donkelar of the Botanical Gardens of Belgium. The Pompon form appeared about 1858, followed by the Decorative, the origin of which is not clearly defined, but probably dates back some 40 or 50 years. Dahlia Juarezi, the first of Cactus Dahlia, was discovered in Juxphaor, Mexico, in 1872, by J. T. Vanderberg, and named Juarezi in honor of President Juarez of Mexico. It was sent by Vanderberg to an English florist, who exhibited it in England in 1880.

Dahlia tubers or bulbs were used as a food in Mexico and at one time in France. It was attempted

to introduce them into cultivation in all Europe as a food for either man or cattle, but the taste was found nauseous to European palates.

### The Culture of the Dahlia

**Success will follow if you observe these instructions**

**LOCATION.** The Dahlia is not as particular as most of our flowers, and will succeed under a great many adverse conditions. There are, however, certain locations where Dahlias seem to outdo themselves. An open sunny location seems to favor them at all times. Dahlias do well on high and low lands, on hillsides or perfectly level land, giving good results in each location.

I find Dahlias are particularly adapted for seashore use, and not only do well, but thrive, for the reason of the moisture, and principally the heavy dews which collect during the nights.

I also find that many varieties do well in partial shade, producing fully as good flowers as they do in the hot sun, especially for exhibition purposes.

Dahlias will grow and do equally well in any kind of soil. I have sand, gravel, heavy and light loam,

low land and hills, and find very little difference, as far as the number of flowers is concerned, the only difference being that in sand and gravel they form a short, sturdy, compact plant, and in heavy loam and low land they grow tall and rank, blossoming about a week later than those planted at the same time in sandy soil.

**PREPARATION.** The soil should be thoroughly cultivated; ploughed or spaded 8 to 10 inches deep, well pulverized and thoroughly worked over, thus affording an opportunity for rapid expansion, and making an easy path for the tiny rootlets. To secure exceptional results, have your soil ploughed or spaded in the Fall or as early as practicable in the Spring; then just before planting have soil thoroughly ploughed or spaded again.

**FERTILIZER.** Fertilization is one of the most important factors, to be successful with Dahlias. We all know that a growing plant, the Dahlia for instance, requires and takes from the soil certain properties; and in order to keep the soil in correct proportion, the materials the Dahlia takes from the soil must be restored. This must be done by fertilization. You can use dressing (either horse, cow, sheep or hen), or chemicals, or any commercial fertilizer rich in nitrogen, potash and phosphoric acid. Fish and potash, acid phosphate in the form of bone flour, or sulphate of potash, are also very effective. My system of fertilization—every other Fall I give my land a top-dressing of stable manure, ploughing under and alternate with lime, using this as a top dressing.

The manure restores the properties necessary, and makes the soil light and mellow, keeps it from being heavy and caking, while lime has the same tendency and keeps the soil sweet. When planting in the Spring, I use commercial fertilizers exclusively (a complete potato fertilizer and ground bonemeal in equal proportions). Every fourth or fifth year I make a Fall planting of Winter rye, then turn under in the Spring, planting the bulbs with commercial fertilizers.

An application of manure (either in liquid or ordinary form), several times throughout the growing season proves very beneficial, furnishing new material for the growing plants and insuring you the very best results.

At the time of planting, two liberal handfuls of fertilizer around the individual tubers would be what I would recommend. After the plants attain a height of three feet, either a handful of fertilizer or any other dressing or manure should be used, and when hoeing, it should be hoed in around the plants. After the plants commence to bloom, it is always well to use fertilizer or dressing around the top of the plants, broadcast on the ground, so that the rains will carry it down to the roots. If applied every three weeks, it will prove very beneficial, although not absolutely necessary, as the fertilizer used when planting would be sufficient to carry the plants through. However, it helps your plants to produce larger and better quality flowers, giving them nourishment at the time they require it most.

In applying the fertilizer, it is best to sprinkle it around the tuber, two, three or four inches from where the sprout will come through, but every precaution should be taken to be sure it does not fall where the sprout will come in contact with it when it pushes its way through the ground, as fertilizer will burn the sprout. It's better to have it a trifle farther away, as the roots will find the fertilizer.

**TIME OF PLANTING.** The time for planting Dahlias varies according to the locality; whether your spot is sheltered or open, earliness or lateness of the season, and the times when the general crop of flowers is desired. Dahlias can be planted any time after danger of frost is over, and under ordinary conditions will bloom in from 6 to 8 weeks after they have been planted. It is always best to wait until the ground becomes thoroughly warmed.

**PLANTING.** Plant bulbs in hills or drills, laying flat down, 6 inches deep. Do not stand the bulb on end. If you stand the bulb on end, having the sprout near the top of the ground, all the new bulbs which will form will grow near the top of the ground and when you have a dry spell your plant becomes stunted, whereas, if the bulbs were planted flat down 6 inches deep, no matter how dry the season, the bulbs would receive sufficient moisture to keep them growing. If planting with manure, cover manure an inch or so before planting bulbs; fertilizer should be thoroughly worked into the soil. Either fertilizer or manure will burn the sprout; be sure to cover with soil.

By planting the bulb first, then covering an inch or so with soil and applying your fertilizer or manure, your plant receives the entire benefit of the dressing. The dressing is above the bulb and every rain carries the food down to the roots, whereas, if your dressing is below the bulb, each rain takes your dressing further away from your plant.

**Summary.** Plant bulb 6 inches deep, flat down, having sprout or eye facing upward; cover with soil an inch or so, applying dressing, and cover in level.

**CULTIVATION.** Cultivation is the principal requirement of the Dahlia—the most important of all operations to insure success. Keep the soil well cultivated and free from weeds; never allow the soil to crust.

**CARE OF PLANTS.** Give thorough cultivation, deep at first and continued once a week until the plants commence to flower. After they commence to blossom do not cultivate, as then is the time the new roots are forming and you are apt to cut off the new tubers, weakening the growth of the plant. Do not fail to stir the soil after each rain, keeping the soil from forming a crust on the surface, or baking, and conserving the moisture in the soil, thus avoiding the necessity of watering.

As the shoot or plant commences to show itself above the ground, care should be taken at this time for the prevention of cutworms and other pests that destroy the young shoots; I recommend Vermine, Arsenate of Lead, Cutworm Killer, or Tobacco Dust, as best preventatives for these pests.

As soon as the plants attain a height of 8 to 10 inches it is time to commence to "train" your plants.

There are three systems from which you must choose: The staking system, the branching method, and the massing system.

**The Staking System** is the most popular, many amateurs finding it the most successful. Dahlias under this system should be planted from 2 to 4 feet apart, according to the amount of space you have to devote—the larger, the more robust the plants. Stakes should be set when the Dahlia is planted. As soon as plants attain a height of 2 to 3 feet they should be secured to the stakes, thus protecting them and preventing the brittle stalks from being blown over or getting broken.

**The Branching Method.** This system is advocated by many professionals and does away with staking. Plant in hills or rows from 18 to 30 inches apart. When your plant has two sets of leaves, pinch off or cut out the whole top of the plant; at each leaf a branch will start, thus making four branches, one at each leaf. Do not pinch off your plant more than once, as this system makes your plants two weeks later in flowering; but you receive four flower stalks, each of which will blossom equal to the one stalk which you would have received had you left your plants growing without pinching. When the plant is grown it will have a short, strong, single stalk, which comes only an inch or two above the ground, with four branches of flowering stalks. The plant is short and has a neat branching appearance; the branches are self-supporting and are not easily blown over by the wind.

**The Massing System.** This is the system I use in planting my immense fields—avoiding the extra labor and expense of staking, the woodeny effect of stakes and giving a solid mass of foliage and flowers, more beautiful and effective than where Nature's beauty is broken at each interval with a stake. Plant bulbs in rows from 10 inches to 2 feet apart according to the amount of space you have to devote. The plants are self-supporting, each plant supporting and protecting the others.

At the height of 18 inches spray occasionally with Arsenate of Lead, "Black Leaf 40," Bordeaux Mixture, Hellebore, Pyrox, Slug Shot, Whale Oil solution or other first-class solutions to kill and keep away the aphis or green fly, which often infests Dahlias.

Both wood ashes and lime are good at all times, improving the condition of the soil and are effective as preventatives against insect pests.

To obtain the largest and most perfect flowers, only the best and largest buds should be allowed to mature; the others being taken off, enabling the full strength to develop those into exhibition blooms.

**DISBUDDING.** Some varieties of Dahlias require thinning and disbudding to produce the best flowers. Varieties having an excessive amount of foliage and small growth should have a considerable part of their branches removed, while those having more buds than can be properly developed or matured should be disbudded. The operation in no way endangers the plants and anyone can do it. Thin and disbud if necessary, moderately or severely as conditions seem to require.

Taking a budded stalk or branch, you will note the large or first bud on the stalk, and also, that at each leaf all the way down the stalk new shoots or budstalks form; these in turn produce buds and flowering stalks, which overtop the first bud. The first bud on every stalk is always the largest and produces the largest and best flower, ordinarily. Before the first flower is in full blossom the first two side shoots have formed buds and burst into flowers. These in turn become passe, to be replaced by flowering shoots from the set next below, or the second pair of side shoots.

On most varieties the first flower has a short, stiff stem; we disbud to lengthen the stem and to secure larger flowers.

**The Proper Way to Disbud:** When the first bud is small the first set of side shoots should be removed with a sharp knife. This forces all the plant life that under ordinary conditions would have developed the first two side shoots, into the first bud, making

the first flower much larger and giving it a good long stem. Removing the first sets of shoots also forces ahead the second set and they in turn burst into flower.

As you cut and remove your flowers, your plant sends forth new flowering stalks from the bottom of the plant; the more flowers you cut, the more will grow.

Disbudding is more generally used for flowers for exhibition purposes. When wishing the largest flower possible for exhibition purposes, you can disbud every side shoot down the entire length of your stalk, forcing all plant life into the one flower, thus growing one flower of gigantic size; this disbudding in addition to forcing with manure (taken up under forcing) insures you much greater success at exhibitions.

Anyone can grow Dahlias of exhibition quality if they will digest these remarks, study plant requirements, and then act accordingly.

After your plant has been blossoming continually and flowers commence to grow smaller, then is the logical and proper time to fertilize. Apply any good fertilizer broadcast, or any kind of manure available, but it is better to make two moderate applications than too much at one time.

**FORCING.** To produce the finest flowers for exhibition purposes use staking system. Plant 3 to 5 feet apart, using a liberal amount of manure or fertilizer; cultivate frequently; apply fertilizer or manure, broadcast or liquid form, at each or every hoeing and disbud. Nitrate of soda proves very effective for forcing. Apply in liquid or crystal form, when plants are in bud; make applications often, but do not use too much at a time. Nitrate of soda is very powerful, and if too much is used, it will burn up your plants or force them to such an overgrowth that the roots will decay during the Winter. Apply nitrate of soda in crystal form on top of the ground, or in liquid form, using one tablespoon of nitrate of soda crystals to a gallon of water, using sprayer or water can.

When the flower buds appear, only one bud should be allowed to come to maturity, enabling each branch to produce one exceptionally fine, perfect flower. The flowers, for quality, must not be allowed to receive the drenching rains or scorching sun when nearing full bloom and should be protected from such.

It is always advisable to cut flowers that are to be exhibited as late as possible at night when the dew is on them, placing them in water and keeping them as cool as possible over night, thereby enabling them to withstand handling, packing and transportation.

**WATERING.** The amount of water depends largely upon the locality and amount of rainfall. In regions where the rainfall is scanty and where sprinkling and irrigation must be regularly practiced, Dahlias should be watered more frequently than in localities where there is abundant rain. Watering is very beneficial, adding perfection to blossoms and richness to color, but do it judiciously. A thorough soaking, with the soil stirred the following day, is excellent; but a constant surface sprinkling every day causes surface roots and soft growth. When you have continuous dry, hot weather, I recommend that you water your Dahlias as often as you think it beneficial.

**HARVESTING.** The harvesting and packing for Winter is very important, upon which depends your future success. Should you lose your Dahlias during the Winter you will be obliged to buy new ones in the Spring, therefore these suggestions are important.

Dahlias should be harvested shortly after their foliage has been killed by frost. I find from experience that as soon as the frost kills the foliage the strength of the stalk recedes into the bulbs. By digging two or three days after your plant has been killed by frost your clumps are in a perfectly dormant condition, having no sprouts, keeping perfectly all Winter and sending forth sprouts in the Spring, which is the proper time.

Dahlias may be dug with fork, spade or plow. In digging or harvesting the clumps great care should be taken. Dig them and dig very carefully; do not pull them up. You have large clusters of bulbs; each bulb has a neck, which is the small portion between the bulb and where it joins the stalk. The clumps should be dug or lifted carefully, so as not to break the necks of the bulbs. If you crack, girdle or break the necks, sometimes they will dry up, other times decay. However, when the clumps are divided, the bulbs with broken necks are weak and not as good and it requires longer for the bulbs to become established before they commence to grow after they are planted in the ground. After removing the clumps shake gently to remove the soil that would naturally fall off. Cut off tops within two or three inches above tops of clumps, allowing them to be exposed to the sun and air for only an hour or two. Do not allow them to stay out two or three days to dry up, then wonder why they are withered and fail to sprout. Pack in a cool, frost-proof place where extremes of temperature may be avoided—a place having an average temperature of about 45 degrees. Do not cover or pack in any material or with any substance. Cork, sawdust, shavings, coal ashes, sand or earth, all hold and retain a dampness or moisture which is unnatural, making it too close, compact and damp, causing the clumps to start to mildew or decay. Would you pack your potatoes in any of the above? Simply pack clumps one on top of the other, placing each clump upside down. Undoubtedly you are aware that the Dahlia stalk is hollow and that this hollow contains a watery substance or acid. If you pack your clumps with the stalks up the acid will flow back into the crown of the clumps, causing decay, whereas if you turn your clumps upside down the acid must flow out, and clumps will remain in a perfectly dormant condition. Pack clumps upside down in boxes or barrels, packing; in a cellar having a cement bottom or heat, the boxes or barrels should be lined with heavy paper and covered with paper or burlap. Covering with paper or burlap excludes the air and preserves a more even temperature. In heated places the circulation of air and heat causes the bulbs to shrivel and dry up; a covering of this kind prevents the roots from shrivelling.

**DIVISION OF CLUMPS.** Although I divide clumps all Winter, it is because of the number of clumps I have to divide; I recommend that the amateur wait until Spring before dividing. Dahlias keep during the Winter much better in clump form. In the Spring the clumps commence to send out sprouts which aid in dividing properly.

Take the Dahlia clump as it was harvested with the portion of the original stalk from which the top was removed.

Upon examining the clump you will notice that the tubers formed at the base of the stalk and that each tuber has a crown, neck and body. The crown being the bulging portion where it is connected with the clump, the neck the small portion between the crown and the body of the tuber. By examining carefully, small eyes or sprouts can be detected on the crown and stalkbase. These eyes produce the new plants, so in separating it is necessary that each tuber have an eye. Without an eye the tuber is absolutely worthless.

In separating a sharp knife should be used and great care taken. The best way is to remove each tuber individually but in cutting it is necessary that each tuber have a crown or a portion of the stalk, as it is upon this that all eyes grow.

First of all select the tuber that you think can be most easily removed. With the point of your knife cut deeply into the base of the stalk, cutting so to leave an equal amount of the stalk-base for each tuber, and so that each tuber has its crown. By cutting deeply into the stalk-base on both sides the tuber becomes separated from the clump, leaving a "V" shaped portion of the stalk-base as a crown or head, upon which the eye is found or will grow. The next tuber favorably located from the separating standpoint can then be chosen, and removed by again cutting the stalk-base, and so on until the stalk-base becomes the crown of each individual tuber.

**SIZE OF BULBS.** The size of the bulb or tuber does not in any way designate the size or quality of the flower. Some varieties of Dahlias always produce very small bulbs, while other varieties make large ones. Do not consider small bulbs worthless, for they are equally as good and in many cases better than large ones. Medium and small-sized bulbs more often produce the finest and highest colored flowers, and in many cases the best and most effective plants. The only requisite of a Dahlia bulb is: be sure that your bulb has one or two eyes or sprouts, whether large or small, and with proper cultivation, success is generally assured. A clump, root, bulb, or division of a clump, potroot, cutting, sprout, and even a Dahlia seed, will grow and blossom, all equally well. It is not the size, but the care and cultivation—cultivation is the principal requirement of the Dahlia.

**CONCLUSION.** There are no set rules to follow invariably by all or even by any one grower year after year. In fact each soil, location, climate or season may call for different treatment. Study your plants; watch them as they develop; try all experiments along lines in harmony with nature's laws. Success with Dahlias is the same as with anything else; do everything in moderation; excess in any direction is unwise. In many locations conditions are so favorable that Dahlias grow to perfection with practically no attention. So it is with seasons—some years Dahlias do well the entire season, but there is no reason why Dahlias should not be grown successfully year after year. My methods of cultivation are simple and easily followed; the treatment and requirements are so simple, there is no reason why you should not be successful with your Dahlias. The Dahlia is one of the easiest plants to grow and will produce more flowers than any other plant in the garden if properly cared for.

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